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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Yellowstone NATIONAL PARK

Copy from **FILE NO. 143**

MONTHLY REPORT

f o r

SEPTEMBER,

1920.

MONTHLY REPORT

1920.

September.

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Notes Engr., painter, Bulletins for "ept. by Park Naturalist, and

Mo. Report of Chief Ranger Office, attached.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

M. L. Liddleys
COPY

THE SUPERINTENDENT

October 9, 1920.

Dear Sir:

The following is my report on conditions in the Yellowstone National Park, and on the operation of the park, for the month of September, 1920:

GENERAL CONDITIONS:

The monthly mean temperature was 50.3, which was 3.1 degrees colder than the normal for the month of September. The minimum temperature was 25 deg., on the 26th. Normally September is the driest month of the year, but this September there was a total of 1.44 inches which is 0.43 inches more than normal, and made the month wetter than any of the previous nine, except March and May. Of this, there was 2.0 of snow which has been exceeded but twice in September during the past 15 years. The heaviest September snowfall of record was 7.8 in 1919. The wind blew a total of 5776 miles during the month, which makes an average velocity of 8 miles per hour for the entire month, representing the greatest wind velocity for September since the records began in 1904, with one exception. The percentage of sunshine possible was 68, which is also above normal and the highest for the month for 15 years.

From the above figures, it is apparent that the month was quite unusual from the standpoint of weather. The heavy rains beginning on the 5th, which turned to snow in the park at the higher levels, made rather unpleasant traveling for tourists up to about the middle of the month, but from then on to the 21st the conditions for travel were again excellent. On the 6th and 7th the regular traffic was stopped through Dunraven Pass, on account of the slippery condition of the road, and routed from Canyon to Mammoth by way of Norris. As soon as all of the regular rail tourists were out of the park, beginning September 21st, Dunraven Pass was closed entirely to traffic, so as to permit better progress in the pass on the work of widening road.

Camp Roosevelt near Tower Falls was closed for accommodation of tourists on September 7th. The hotels and the main camps closed September 18th to 20th.

During the storm which occurred September 22 to 25, 14 inches of snow fell at Lake, Thumb, and the eastern side of the park, and stopped all motor traffic for several days. In Sylvan Pass it drifted to a depth of six feet for a distance of about 60 feet. Several cars bound for the park via the eastern entrance, turned back, and either abandoned the trip entirely, or came around via Gardiner. Traffic via the eastern entrance was resumed on September 30th, when the drift in the pass was shoveled out by private motorists. Several cars and trucks in the park were delayed on account of the storm, and were obliged to wait until the roads were cleared out. The snow was not deep enough to interrupt travel on the west side. Since the 25th, the roads have again cleared up, and quite a number of cars have entered the park, and part or all of the trip has been made by them.

There have been no accommodations for tourists inside the park since September 20th, but those traveling have either had camping equipment with them, or stayed at hotels outside and made one-day trips into the park, returning the same day. In a few cases the Camps Company have taken care of a few tourists, permitting them to stop with the construction crews which they are working in the park.

All concessioners closed up their business very promptly at the end of the season. By the evening of the 20th every hotel crew had left, and the general offices of the Hotel and Transportation Companies were moved to Helena, Montana, about October 1st. The Camps Company has transferred its office to winter quarters in Livingston, Montana. J.E. Haynes left for his St. Paul office on September 28th, and C.A. Hamilton closed up his business and left for the winter at about the same time. Henry J. Brothers left for Salt Lake City immediately at the close of the season. C.A. Hamilton was permitted to close his branch store at Thumb on September 5th.

The train service to the three entrances approached by rail was put on a winter basis immediately following the close of the park tourist season. Daily trains still come to Gardiner and Cody, and weekly train service to West Yellowstone, Mont., is still furnished by the O.S.L. but will doubtless be discontinued entirely, as usual, before winter sets in.

The usual Monthly Meteorological Summary, furnished by the United States Weather Bureau, is enclosed herewith.

Travel.

The enclosed copy of the Chief Ranger's Travel Reports for September includes figures on park travel for September, 1920, and for September, 1919 for comparison. Also season's travel for 1919, and for 1920, for comparison.

Other very interesting figures on park travel, compiled in the Chief Ranger's Office, are as follows:

Largest Days of Travel for number Passengers.

1920

Sept.1, Transportation Co...255
Sept.1, Private cars.....636

1919

Sept.2, Transportation Co. 169
Sept.1, Private cars.....421

By entrances, with Transportation Co.

Sept.3, North entrance.....76	Sept.7, North entrance,... 78
Sept.1, West entrance.....179	Sept.2, West entrance,... 94
Sept.5, East entrance..... 42	Sept.3, East entrance.... 31

By entrances, with private transportation.

Sept.5, North entrance.....153	Sept.1, North entrance..... 161
Sept.1, West entrance..... 96	Sept.3, West entrance..... 94
Sept.1, East entrance.....142	Sept.5, East entrance..... 78
Sept.4, South entrance..... 33	Sept.11, South entrance..... 28

Largest days of travel for paid automobiles.

All entrances.

Sept.1..... 101	Sept.3..... 63
-----------------	----------------

By entrances.

Sept.5, North entrance..... 35	Sept.1, North entrance... 26
Sept.1, West entrance..... 26	Sept.3, West entrance... 21
Sept.1, East entrance..... 40	Sept.4, East entrance... 20
Sept.5, South entrance..... 7	Sept.11, South entrance... 5

Largest days for total number of passengers entering.

<u>1920</u>	<u>1919</u>
September 1.....636	September 1.....421

During the month of September, 1920, 7,356 people entered the park, as compared with 4,406 entering during September, 1919, which is an increase of 2,954, or about 37 per cent.

During the month of September, 1920, 1,024 paid automobiles entered the park, as compared with 776 paid automobiles entering during September, 1919, which is an increase of 248, or about 28 per cent.

During the month of September, 1920, 3,234 people entered the park with the Yellowstone Park Transportation Company, as compared with 1,646 people entering with the company during September, 1919, which is an increase of 1,588 people, or about 47 per cent.

The total travel for the season to include September 30, was 79,777 people for 1920, as compared with 62,261 for 1919, which is an increase of 17,516 people, or about 27 per cent.

Labor and supply market.

Although many men were laid off by park concessioners at the close of the season, and our crews were reduced daily during September as the work was discontinued in the field, yet the demand for skilled labor does not even yet appear to be filled. Most of those who work in the park during the summer plan to leave with the closing of the hotels and camps, and few care to remain for further work after that time. The concessioners who are taking up their construction and maintenance program where they left it off last spring at the opening of the season, are still having some difficulty in securing as many mechanics as they want.

Supplies of all kinds are more reasonable in price from month to month, though still high.

II. PERSONNEL.

Employees.

Oct
On September 1st there were 308 employees on duty under this office, but by September 30th this number had been reduced to 125. *Sept 31*

A list of employees serving under appointment, with a general statement of the kind of work performed by each class, is given below.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1	Asst. Engineer	In charge of road repair crews at headquarters, and on west and south roads. <i>making repairs</i>
6	Clerks	1 disbursing agt. and purchasing clerk; 1 on orders, proposals and vouchers (resgd. close September); 1 on time keeping and cost accounting; 1 stenography and typewriting; 1 stenographer-typist since Sept. 4, on files and stenographic work; 1 stenographer-typist since Sept. 9, on orders, proposals and vouchers
3	Electricians	1 in charge power plant, read meters and did necessary line work; 2 assistants who operated plant regular shifts including Sundays.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1 ✓	General Foreman	In Charge of construction work in Dunraven Pass.
7	Foremen	1 in charge of engineering work, and road crews on east side of the park. <i>Making Sump</i> 1 in charge of stables at headquarters. 1 in charge of construction of cement walks at Upper Geyser Basin (furloughed Sept. 16). 1 in charge of repairs to sprinkling system (furloughed Sept. 15). 3 in charge of road crews (furloughed Sept. 15-16.)
1 ✓	Telegraph Operator.	Sent and received all Gov't Western Union messages; operated one shift on telephone switchboard.
2 ✓	Telephone Switch-board operators.	Operated telephone switchboard, daily shifts including Sundays.
1 ✓	Master Mechanic	In charge of shops, and of repairs to heavy road machinery in the field.
1 ✓	Blacksmith	Since Sept. 16. General blacksmith work, including shoeing horses in shop and in the field for crews; overhauling and repairing tools and equipment.
1 ✓	Steward and Master of Transportation.	In charge of all transportation and of storehouses.
1 ✓	Painter	Renovated quarters at headquarters, and painted signs for guidance of public in the park. Also painted equipment.
1 ✓	Lineman	In charge of telephone and telegraph system including crew doing heavy maintenance work in the park. Did emergency work and installed instruments.
1 ✓	Laborer	Miscellaneous work at Headquarters.
1 ✓	Handyman	Worked in storehouse issuing and receiving supplies.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1 ✓	Buffalo Keeper.	In charge of tame buffalo herd, and raising forage for same at Lamar River Farm.
1 ✓	Asst. " "	Raising hay for buffalo and other animals on Slough Creek.
1 ✓	Park Naturalist	In charge of information office, scientific research, timber cutting operations, etc.
1 ✓	Plumber	In charge of general plumbing and repairs to same at headquarters, and building automobile camps.
1 ✓	Motorcycle Mechanic,	Repairing motorcycles.
2 ✓	Automobile "	Repairing motor trucks and touring cars.
1 ✓	Watchman	Made hourly patrols during night at Headquarters; took care of office, and kept furnace going during the night.
1 ✓	Chief Ranger	In charge of Ranger force.
4 ✓	Assistant Chief Rangers.	One in charge of Chief Ranger Office; 1 in charge of southern district; 1 in charge of western district; 1 in charge of northern district and of crews and pack trains building trails and cabins.
6 (✓)	First-class Park Rangers.	Five in charge of ranger stations; 1 in charge of show herd of tame buffalo, and making patrols.
15	Park Rangers	In charge of ranger stations; doing patrol work formations, roads and trails, checking automobiles etc.
30	Temporary Park Rangers.	Patrolling for fires, guarding formations, regulating traffic, motorcycle patrols, checking automobiles at entrances, etc. (25 laid off - 6 on 10th, 1 on 12th, 4 on 13th, 8 on 15th, 1 on 18th, 2 on 19th, 2 on 20th, and 1 on 28th.)

In addition to the regular employees listed above serving under appointment, the following were employed temporarily by the day:

(Set from District)

	<u>On Sept. 1st</u>	<u>On Sept. 30th</u>
Mechanics	17	9
Teamsters	62	8
Laborers	59	18
Skilled laborers	50	17
Cooks	<u>17</u>	<u>5</u>
	205	55

Leaves of absence.

During September annual leaves of absence were granted as follows:

F.J. Townsend	Park Ranger	13 days - Sept. 12-27
Wendell M. Bishop	" "	5 " - Sept. 16-18
W.H. Purdue	" "	2 " - Sept. 21-22
A.R. Edwin	Clerk	7 $\frac{1}{2}$ " - Sept. 22-(Noon)-30
Calvin O. Davis	Park Ranger	1 $\frac{1}{2}$ " - Sept. 24 (Noon)-25 (Noon)
William J. O'Loughlin	Watchman	3 " - Sept. 28-30
W.M. Bishop	Park Ranger	6 " - Sept. 19-25
Dean M. Hausman	" "	7 " - Sept. 30-Oct. 7
Alexander C. Wiley	Clerk	8 " - Sept. 28-Oct. 6
Carrie O. Haunesser	" "	$\frac{1}{2}$ " - Sept. 10 (Noon)-Sick Leave.

Appointments.

- Sept. 4: Carrie O. Haunesser, Stenographer-Typist, \$1520 per annum.
 Sept. 9: Helen E. McNutt, Stenographer-Typist, \$1200 per annum.
 Sept. 16: Charlie E. Stimmett, Blacksmith, \$1320 per annum.

Separations.

- Sept. 30: A.R. Edwin, Clerk, \$1440 per annum. Resigned.
 Sept. 15: William H. Ferrell, Foreman, \$1560 per annum. Furloughed
 Sept. 15 - March 31st.
 Sept. 16: Deate T. White, Foreman, \$1800 per annum. Furloughed
 Sept. 16 - April 30th.
 Sept. 7: John A. Evans, Foreman, \$1680 per annum. Furloughed 9/7-5/6/21.
 Sept. 18: Charles W. Enochs, Foreman, \$1800 p.a. Furloughed 9/18-4/30/21.
 Sept. 20: Russell Sprinkle, Park Ranger, \$80 per month. Laid off.
 Sept. 10: Vernon S. Downs, Park Ranger, \$80 per month. Laid off.
 Sept. 13: Ray D. Teesdale, Park Ranger, \$80 per month. Laid off.
 Sept. 10: Lew Sarett, Park Ranger, \$80 per month. Laid off.
 Sept. 13: Leon D. Mink, Park Ranger, \$80 per month. Laid off.
 Sept. 10: Robert A. Ide, Park Ranger, \$80 per month. Laid off.

Separations - Continued.

Sept. 12: Guy W. Grove, Park Ranger, \$80 per month. Laid off.
 Sept. 10: Lessing L. Engelking, Park Ranger, \$80 per mo. Laid off.
 Sept. 15: Louis Draskin, Park Ranger, \$1200 per annum. Laid off.
 Sept. 15: Roger C. Goode, Park Ranger, \$1200 per annum. Laid off.
 Sept. 10: William C. Troutman, Park Ranger, \$100 per month. Laid off.
 Sept. 13: Nelson J. Howard, Park Ranger, \$100 per month. Laid off.
 Sept. 13: Frank J. Parsch, Park Ranger, \$80 per month. Laid off.
 Sept. 20: Henry Ravenel, Park Ranger, \$80 per month. Laid off.
 Sept. 19: Hollis W. Matthew, Park Ranger, \$1200. Furloughed indefinitely.
 Sept. 19: Emmet S. Matthew, Park Ranger, \$1200 p.a. " "
 Sept. 15: John L. Tyler, Park Ranger, \$1200 p.a. " "
 Sept. 15: Charles H. Watkins, Park Ranger, \$1200 pa. " "
 Sept. 15: L. Dow Nichol, Jr., " " \$1200 p.a. " "
 Sept. 10: Frederick C. Fishback, Park Ranger, \$80 per mo. Laid off.
 Sept. 28: Wendell S. Keate, Park Ranger, \$80 per mo. Laid off.
 Sept. 15: Frank H. Knight, Park Ranger, \$80 per mo. Laid off.
 Sept. 18: Arthur R. Best, Park Ranger, \$80 per mo. Laid off.
 Sept. 15: Eugene Robertson, Park Ranger, \$80 per mo. Laid off.
 Sept. 16: Isabel Bassett Wasson, Park Ranger, \$1200 p.a. Laid off.
 Sept. 16: Fauntley E. Mase, Foreman, \$1680. Furloughed 9/16/20-4/30/21.

As far as the records show
 Isabel Bassett Wasson,
 Park Ranger, \$1200⁰⁰ p.a.
 was the first woman
 Park Ranger in Yellowstone
 History

Wayne Replugh
 5-22-75

III. WORK COMPLETED:

(a) Construction of Physical Improvements.

The crew constructing sidewalks in the Upper Geyser Basin was laid off in time to reach Headquarters on September 15th, and this work was discontinued for the year. During September 250 linear feet of sidewalks were constructed.

The permanent water system to supply the public camp at Upper Geyser Basin, and the Old Faithful Camp of the Yellowstone Park Camps Company, was completed to the extent that the pipe lines were laid. For 3,000 feet from the concrete reservoir and settling basin, the water is carried in a 2½-inch galvanized pipe. Here one branch of 1½-inch pipe is taken off and run 1800 feet to the public camp, and another branch of the same size is run to the Old Faithful Camp, a distance of 1,500 feet. Actual connection to the fixtures in the camps will be made at the beginning of next season.

The telephone line crew finished remodeling the Morris-Mammoth line, giving us four wires between these points which provides two metallic circuits and greatly improves the service to both sides of the park.

The trail crew with pack train transportation, completed the new Jones Pass trail, from Turbid Lake to the east boundary, and then engaged in building and repairing snowshoe cabins.

*Oct
Built about
same cabin at
Buff - I + 2000*

The same crew also built a new cabin on Thoroughfare Creek twice the size of the snowshoe cabins, near the old snowshoe cabin. This new cabin is intended for housing two rangers who will be stationed in the southeast corner of the park in the Upper Yellowstone country all winter. Also a new snowshoe cabin was built on Harebell Creek 9 miles east of Snake River Station on the south line of the park. This was built in the usual manner, of hewed logs, well chinked with mud, size 12 x 16, roof of poles, rubberoid and several inches of earth. Floor of hewed poles. Window shutters and doors of 2-inch plank.

(b) Maintenance and Repair of Physical Improvements.

The snowshoe cabins at Sportman Lake, Grayling, and on the park line south of Riverside Station, were repaired by a small crew with pack transportation. The other crew, which built the Jones Pass trail and built new cabins, also repaired the cabin at Upper Yellowstone, which is located near the new ranger station and can be utilized as a stable or store room.

All haying crews completed their work during the month, and were laid off. The crew at Buffalo farm put up 100 tons of hay in September, making a total there of 450 tons. The crew at Slough Creek put up 75 tons additional, making a total of 300 tons there. The Yancey crew put up 20 tons additional,

making a total of 80 tons . Rangers Winn and Anderson put up 10 tons additional at Soda Butte Station, making the total there 30 tons. This makes a total of 860 tons of hay in stack for winter use at the four points mentioned above. ✓

The small crew with the caterpillar tractor and power grader widened and improved the road from the Canyon Hotel to the garage, $\frac{1}{2}$ mile, and installed culverts - C.I. 2' diameter by 24 ft. long - at two points on this road. This work was completed the first week in September, and the crew was called in to headquarters. ✓

The stone wall laid in cement mortar, $3\frac{1}{2}$ miles from Headquarters on the Tower Falls road was completed and the crew at the end of the month was making a small fill behind the wall. This wall is 142 feet long and has an area of 1,190 square feet. ✓

The small repair crew working in the vicinity of Headquarters repaired the log crib near the Chinese Garden, removed the debris which had collected in the culverts in the Gardiner Canyon, and graded and levelled off the dirt floor in the large machine storage shed. ✓

Two men who were repairing holes in the oil macadam road near West Yellowstone, completed this work on September 18th. ✓

The crew under Foreman Enoch did general road maintenance work in the South Forest in the vicinity of Arizona Creek, but was laid off in time to reach Headquarters on September 19th. ✓

The crew under General Foreman Small completed its work for the fall in Dunraven Pass on September 30th, and made preparations to move in for the winter. One large fill was completed, another made possible, and $\frac{1}{2}$ mile of road widened, during September. This work is to be continued in the spring.

Foreman Muse completed the new road around the Lake Hotel, with the exception of rolling, and putting on a little more gravel in places. A mechanic from the garage was sent out to repair the roller, and he did the rolling up to the end of the month.

The crew working under Conahan completed the repairs in the vicinity of Blacktail Deer Creek on the Tower Falls road, and then moved in to Headquarters and commenced the construction of the new road in to Mammoth Camp. This road was about 50 per cent completed at the end of the month.

The crew of 2 men on the East Entrance road arrived at Headquarters and were laid off the middle of the month, after storing most of their equipment at Sylvan Pass Station.

All maintenance and sprinkling crews were called in on September 5th, and the construction and improvement crews completed their work as soon as possible after that date.

(c) Miscellaneous Improvement Work.

The work of mowing and watering the lawns at Headquarters was discontinued before the end of September as no longer necessary.

The public camps were given a good cleaning up after the travel dropped off so there were but few to occupy them, water pipes were drained, and the men who had been employed cleaning camps were laid off about the middle of the month.

(d) Service to the Public.

Towards the approach of the closing of the hotels and camps, the employees became somewhat less attentive, and the service was not quite up to its high standard maintained during the height of the season. This condition, however, is almost inevitable, as during the last few days everybody begins to lose interest, and their minds are centered upon the going away at the close of the season. This condition was not sufficiently apparent, however, to cause any serious complaints, and even up to the last day most tourists left with the idea that they had been well treated. The total number of tourists entering the park in September was 7,356, as compared with 4,402 in September in 1919, the increase being about 37 per cent.

Information Service. A total of 826 inquirers visited the information bureau during the month of September. Two hundred and forty-six of these visitors asked specifically for the museum. Virtually all the visitors were interested in the few specimens in the office, and asked many questions about them. It became increasingly evident that with proper labeling and exhibition of

a larger series of specimens, this branch of our work would become very popular.

A total of 23 pamphlets and 37 maps were sold.

A series of monthly bulletins on flowers, geology, animals, and birds, was prepared and placed at all ranger stations, camps, hotels, and other public places at the beginning of the month. A total of 39 sets were so placed and 197 sets were given out to parties calling for them. This large proportion of sets given out makes it evident that the demand is increasing, and that the printing of these sets for distribution should be made a regular feature of our work. Copy of the set for September is enclosed herewith.

A ranger was on duty up to the end of the season with the show herd of tame buffalo at Mammoth Hot Springs, and gave out information and answered questions from tourists who visited the herd.

IV. WORK IN PROGRESS.

(a) Construction of Physical Improvements.

The crew building cabins was engaged at the end of September in the construction of cabins along the south line of the park. The details of this work are given under a previous heading.

(b) Maintenance and Repair of Physical Improvements.

One small crew with pack train is still engaged in repairing the snowshoe cabins along the west line of the park.

The electricians kept the power plant running 24 hours a day up to the close of the season on September 20th, when the hours were cut down to 19 per day, shutting the plant down from midnight to 5:00 A.M. During the month the plant generated a total of 15,930 kilowatt hours of current, of which 5,504 kwh were consumed by park utilities, 1,155 for street lighting, and the balance was used by our shops for power, for lighting government buildings, and loss on the power lines. The peak load for the month was 68 KW. In addition to running the plant one of the electricians attended to necessary repairs, installed new lights and fuses where burned out, and read the meters. In early September I took occasion to have an expert of the Westinghouse Electric & Mfg.Co., who was visiting here from Butte, make quite a thorough inspection of the power plant. He reported it to be in excellent condition, well kept up and maintained, and commented especially upon its cleanliness.

The painter and one assistant devoted most of the month to renovating living quarters for employees at Headquarters. They also painted a few bulletin boards for next summer's use, and painted the iron tanks used for transporting gasoline by truck.

The carpenters repaired buildings, including a log barn at Gibbon Meadows sprinkling station, a log barn at Morris, and the log ranger station at Soda Butte. Most of their time, however, was put in remodeling the old hospital at headquarters, so it can be used for quarters and general mess for single employees, to take the place of the stone bachelor quarters which will be remodeled into a museum and office.

The balance of the force at the shops was employed in repairing motor vehicles and road machinery, and shoeing horses used in the crews.

Improvements by concessioners.

Most of the concessioners were too busy up to the close of the season taking care of the wants of tourists to do much in the line of improvement work, and they all closed up promptly on September 20th. Since that time the plans for fall improvements have been made, but very little was accomplished before the end of September.

A gas filling station was begun on the store site of George Whittaker at Canyon.

The Hotel Company continued the work on the dormitory for female help at Canyon, and this is still under way.

The Transportation Company begun the important work of building a steam heating plant for its garage building at Mammoth so it can be heated adequately for winter work on the motor vehicles. The boiler for this plant was taken from the old Fountain Hotel.

V. PLANS OR PROPOSED WORK:

It is proposed to make all changes in details of rangers for winter stations, supplying them with rations etc.

The work of repairing and building snowshoe cabins will be continued during September, to completion.

Arrangements are being made with the Bureau of Animal Industry, Department of Agriculture, to furnish vaccine and

inoculate the calves in the tame herd of buffalo for prevention of hemorrhagic septicemia.

The linemen will move the switchboard from its present location in the stone bachelor officers quarters, to a smaller room on the second floor, preparatory to general changes in the interior of the lower floor of the building to adapt it for use as an office and museum.

Work by the carpenters, tearing out partitions and making changes in the interior of the bachelor quarters will be begun as soon as convenient.

The whole organization is to be put on a winter basis, general mess discontinued, etc., at an early date.

The Camps Company is preparing to continue its building program, but just what building will be commenced this fall has not been decided definitely.

VI. POLICIES.

No new policies were adopted during the month of September.

VII. COST OF OPERATION.

The cost report showing expenditures for September will be transmitted as soon as practicable. This work is a little behind on account of the resignation of the cost clerk.

VIII. OTHER MATTERS OF INTEREST:

Wild Animals.

The storms of September brought a few deer and antelope

down, and they were seen by nearly every tourist who came as late as September 5th. The elk seem to be staying high in the mountains, and only occasionally a few were seen. There is an abundance of forage, easy of access, for all of these animals. Rangers report many calves with the elk herds they saw.

A few tourists reported having seen mountain sheep on Mount Washburn.

The tame buffalo herd was held back on Mount Morris all through the month, except on two or three occasions when they were brought down for moving picture camera men. A second bull was found dead during the month, cause unknown.

Rangers reported seeing a herd of 25 moose in the southwest corner of the park during the month.

Fishes.

Fishing was fairly good in the streams in the northeast corner, in Madison River, and near the south boundary in Snake River. On September 21st, Ranger Bowman caught a 20-lb. Mackinaw Trout in Snake River near the station.

The extensive planting of fish begun in August was carried to completion during September, with plants as follows:

Blackspotted trout planted by National Park Service:

Sept. 2, in Tower Creek,.....	76,000
Sept. 3, in Hellroaring Creek,.....	52,500
Sept. 4, in Slough Creek,.....	105,000
Sept. 11, in Sedge Creek,.....	52,000
" 11, in Bear Creek,.....	48,000
" 13, in extreme headwaters of Bechler River,...	84,700

Of the plants noted above, those in Tower Creek, Hellroaring Creek, and upper Bechler River, had to be transported by pack train. The plant made in Bechler was at the suggestion of Mr. Wm. C. Gregg, who has made a careful exploration of the southwest corner of the park during the summer, and who was so intensely interested in having the fish planted that he furnished the pack outfit at his own expense.

Just before closing the hatchery on Yellowstone Lake on September 15th, the U.S. Bureau of Fisheries made the following plants of blackspotted trout fry in small streams running into Yellowstone Lake:

Columbine Creek,.....	130,000
Cub Creek,.....	180,000
Clear Creek,.....	100,000
Thumb,.....	110,000

The Superintendent of this subhatchery, reports that 6,512,000 eggs of the blackspotted trout were collected during the season just past, of which 5,682,400 were collected from Yellowstone Lake and tributaries, and 829,600 from Fish Lake, near Soda Butte Station. About 11 per cent were lost in hatching. About 33-1/3 per cent of the number of eggs hatched were planted back into park waters, which is a much higher percentage than has usually been left in the park. The balance were shipped out and distributed from the federal hatchery in Bozeman, Montana.

On September 25th, the Supervisor of the Absaroka National Forest, planted 5,000 black-spotted trout fry in "Hidden Lake" just

outside of the park on the north, near Buffalo Creek. These trout had to be taken through the park with pack outfit to reach the lake.

Seasonal Changes.

Botanical: There was no growth of flowering plants during the month; no opening of fresh blossoms. A few of the old fringed gentians, a goldenrod, and a Rocky Mountain bee plant persisted until the 18th, and purple/sunflowers ^{asters and} five days later. On the 18th, the autumn coloring of quaking aspen and shrubs was at its height. Willow leaves falling in numbers on the 17th, and quaking aspen leaves on the 21st.

Birds: The last of the following birds were seen: Tree swallow on the 8th, spotted sandpiper on the 9th, nighthawk on the 15th, Swainson hawk on the 20th, yellow warbler on the 21st. The main flight of Brewer blackbirds passed through on the 16th, and pinl-sided juncos on the 20th. The mallard drakes began acquiring plumage of winter on the 21st.

Animals: Most of the whitetail deer retained their summer coats throughout the month, but the last of the mule deer in the reddish coat of summer was seen on the 9th. The first elk whistle was heard on the second and the bulls began "horning the brush" three days later. The rutting season began about the 15th. The last woodchucks and mantled ground squirrels were seen on the 5th. On the 20th the first band of twelve antelope appeared on the field near Gardiner.

There are no positive indications yet as to an "early" or a "late" season. No indications of another hard winter. The above dates give the season as one day later than average.

Arrests and Violations of Law.

The following is a list of arrests made during September, with action taken noted in each case:—

Date Tried	Names of defendants.	Charge	Action Taken.
Sept. 3	W.L.Clove C.O.Clove	Speeding "	Fined \$10 each and costs.
Sept. 9	C.A.Hamilton Ernest Matherson Joe Kiou Adolph Peters	(Cutting (Green (Timber	(Acquitted (and (case (dismissed.
Sept. 9	William Asplin	Petty Larceny	Fined \$100 and costs.
Sept. 9	Fred Anholt Mark Borchert	(Cutting (knotted trees.	(Fined \$5 each and costs.
Sept. 13	J.I.Miller	Speeding	Fined \$25 and costs.
Sept. 14	Elias Ahuja	"	Fined \$25 and costs.
Sept. 20	C.A.Hamilton	"	Fined \$25 and costs.

Forest Fires.

No forest fires occurred during the month.

Timber Cut.

Reports were received from the various companies holding concessions in the park, as to amount of timber taken for various purposes during the fiscal year ended June 30, 1920. The summary

of timber so taken was as follows:

<u>For Firewood:</u>	<u>Cords.</u>
For Government use, cut from dead timber.....	20
" " " " " green "	80
Cut by Yellowstone Park Camps Company:	
Standing and down dead timber,.....	275
Green timber.....	25 300
Cut by Hotel Company, green timber.....	<u>1,555</u>
Total for firewood.....	1,955 cords.

For building purposes:

Cut by Camps Company, 48,100 linear feet of standing green logs, varying in diameter from 5 to 14 inches.

Cut by George Whittaker for new store building at Canyon, 4,200 linear feet of green logs, averaging 12 inches in diameter.

Accidents and Casualties.

On September 9, Mr. E. Kenison, of Dillon, Montana, reports that while he and his son, each driving a 5-passenger car, were ascending to Dunraven Pass, the son's car slipped in the mud and crashed into his own Franklin car. The damage was not serious.

On September 21, a Buick car driven by Mr. J. B. Ogden and carrying two passengers, ran into a tree while making a turn near the 20-mile post on the road from Lake towards Sylvan Pass. The car was being driven at a high rate of speed. Mr. Ogden had four ribs broken, and Miss Edith Wheeler, one of the passengers, sustained several bruises and a broken jaw, caused by breaking the wind shield. A passing automobile took the occupants of the wrecked car to Helm Lodge. Later the wrecked car was towed to Cody.

Weddings.

On September 20th, Mr. C. A. Hamilton, who owns and operates the general stores at Upper Basin, Lake and Thumb, was married to Miss May Spence, of St. Paul, at 10:30 A.M., in the chapel at Mammoth Hot Springs. The ceremony was performed by Rev. J. F. Pritchard, in the presence of a number of friends and park residents.

Births.

Roscoe Harold Bonnell was born to Mr. and Mrs. Fred L. Bonnell, on September 9th. The father is a mechanic in the employ of the National Park Service.

Contagious Disease.

Whooping cough has been common among the young children residing at park headquarters, since the latter part of September.

Natural Phenomena.

At Norris Geyser Basin, the Monarch Geyser and the Bath Tub continued totally inactive.

At Lower Geyser Basin, the Fountain and Great Fountain geysers continued to play at 4-hour and 10-hour periods respectively.

At the Upper Geyser Basin, Old Faithful played about every 64 minutes, Daisy every 90 minutes, Riverside every 7 hours. Observation

of the Grand Geyser still further confirmed the establishment of eleven hours as its average period.

A rumor that the Mammoth Paint Pot was becoming unusually active was not confirmed.

Special Visitors.

Vice President W. T. Tyler, of the Northern Pacific Railroad Company, entered the park on September 6th via Gardiner, made the trip through the park and out at Cody, returning via Gardiner on September 10th.

Passenger Traffic Manager W. S. Basinger, of the Union Pacific System, and General Passenger Agent D. S. Spencer, of the Oregon Short Line, visited the park on September 11th and 12th, entering and leaving via the western entrance.

Doctor Ralph Fitch, a famous surgeon of Rochester, N. Y., left the park September 7th, after a few days' visit.

Mrs. Ursula E. Davidson, of the National Parks Office of San Diego, California left on September 18th, after a visit of several days.

Associate Sanitary Engineer H. B. Hammon, of the United States Public Health Service, spent several days in the park on an official visit making a general survey of the sanitary conditions. His report and recommendations will be submitted later.

Mr. D. E. Hull, Assistant Landscape Engineer, National Park Service, visited the park officially during the month.

Mr. Herbert Corey, writer, entered the park on August 29 at Gardiner, and left via the same route on September 7th.

The Official Pathfinding Tour, under the auspices of the National Park to Park Highway Association and the American Automobile Association, arrived at the eastern entrance on September 3. The leaders of the party included A. L. Westgard, of Washington, D. C., Gus Holm, of Cody, Wyo., Scott Leavitt, of Great Falls, Montana, and H. N. Burhans, of Denver, Colorado.

Mr. Wm. C. Gregg, of Hackensack, N. J. and daughters, who came in at Gardiner August 8th, left by the same entrance September 26th. They spent most of their time in the park camping on trails with pack outfit.

Mr. R. B. Adams, Tel. Engineer, U. S. Forest Service, from Missoula, Mont., was in the park on September 7th and 8th.

Mr. T. V. Hatcher, of Bear Creek, Montana, called on September 2, stating he had been engaged in surveying a proposed road from Red Lodge to Cooke, Montana.

Supervisor Ernest Shaw, of the Absaroka National Forest, and Supervisor Clark, of the Gallatin National Forest, called on September 25, on their way through the park returning from Buffalo Fork.

Motion Pictures.

The following operated motion picture cameras in the park during Sept.:

A. G. Lucier, of Powell, Wyoming, for International Film Service, New York City.

Leland J. Burrud, of Sunset-Burrud Pictorial Company, of California.

Norman McClintock, of Pittsburgh, Pennsylvania.

Mr. J. E. Haynes, official park photographer, took moving pictures of the same buffalo for Mr. Wm. C. Gregg, the latter part of September.

Miscellaneous.

Entertainments. The Park Curio Shop continued the giving of public dances three evenings a week, and picture shows once a week, at the Post Exchange auditorium, up to the close of the tourist season, when they were discontinued.

Religious Services. Reverend J. F. Pritchard, Episcopal minister from Emigrant, Montana, continued the regular weekly services in the chapel, both morning and evening each Sunday, up to the close of the season. Mass was said by Father Martin, a visiting priest of the Catholic Church, in the chapel on September 5th. Christian Science meetings were held in the chapel on Wednesday, September 1st, and Sunday, September 5th.

Lectures. Park Ranger Mrs. Isabel Bassett Wasson continued her talks on "How the Yellowstone Came to be", daily at the hotel, the Mammoth Camp, and the public camp at headquarters, until about the middle of September.

Copy of Circular No. 28 issued from this office during the month of September is enclosed for your information. Copy of notice to the press with remarks on season's travel through September 18th, is also enclosed.

X. RECEIPTS AND REMITTANCES.

Report of monies due, collected, and transmitted, together with money orders and draft totaling \$160.30 as called for by the reports, is enclosed. Please acknowledge the receipt of this remittance.

Cordially yours,

Horace M. Albright,
Superintendent.

The Director,
National Park Service,
Washington, D. C.

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
YELLOWSTONE PARK, WYO.

SUPERINTENDENT

MEMORANDUM FROM CHIEF RANGER'S OFFICE
TO SUPERINTENDENT

ACCIDENT

On September 21st in the afternoon about 4 p m
a car driven by Mr. J. B. Odgen with passengers, Mrs.
M. E. Leach and Miss Edith Wheeler coming from Lake
to Sylvan Pass was going at a high rate of speed and
in making a turn near the 20 mile post, ran into a
tree. Mr. Odgen received four broken ribs and Miss
Wheeler sustained several bruises and a broken jaw
caused by the breaking of the windshield. The car
was left on the road and the people were taken into
Horn Lodge by a passing car. The people are now
under the doctor's care and doing well.

The car broken down is a Buick, license number
9114, Minnesota license. The car is being towed into
Cody today.

The above information was received from Sylvan
Pass Ranger Station from Ranger Wilkinson this morn-
ing.

Chief Ranger's Office

By Dean M. Hansen

Painter for month of September, 1920

Bullitin Boards for Mr. Skinner
Working on gas tanks
Painting outside of paint shop.
" " " "

Working at Sternitts Quarters

" " " "
" " " "
" " " "
" " " "

" " " "
" " " "
" " " "
" " " "

Working at Headquarters Bldg.

Working at Neumann's Quarters

Working at Headquarters Bldg.

" " " "
" " " "
" " " "
" " " "

A. C. Neumann

Comparative statistics of travel
in the Yellowstone Park 1919 and 1920 through
September 18th

1920
PASSENGERS

travel	NORTH	WEST	EAST	SOUTH	TOTALS
Aug. 31st	8917	14176	3959		27052
travel					
Aug. 31st	13484	13972	14247	2977	44680
travel					
Aug. 31st	<u>411</u>	<u>189</u>	<u>73</u>	<u>16</u>	<u>689</u>
	22812	28337	18279	2993	72421
travel					
1st-Sept. 19th	700	946	246		1892
travel					
1st-Sept. 19th	1226	862	1227	243	3558
travel					
1st-Sept. 19th				<u>1</u>	<u>1</u>
(Aug. 31-Sept 19)	1226	1808	1473	244	5451
TOTALS	24738	30145	19752	3237	77872

1919
Passengers

travel	NORTH	WEST	EAST	SOUTH	TOTALS
Aug. 31st	7093	8171	2777		18041
travel					
Aug. 31st	11554	13795	9633	2274	37256
travel					
Aug. 31st	<u>703</u>	<u>119</u>	<u>72</u>	<u>40</u>	<u>934</u>
	19350	22085	12482	2314	56231
travel					
Aug. 31-Sept 19)	702	702	242		1646
travel					
Aug. 31-Sept 19)	938	668	617	133	2356
travel					
Aug. 31-Sept 19)	<u>74</u>	<u>3</u>	<u>17</u>	<u>4</u>	<u>98</u>
Aug. 31-Sept 19)	1714	1373	876	156	4100
TOTALS	21064	23458	13358	2470	60350

Passage in	NORTH	WEST	EAST	SOUTH	TOTAL
Number of Tourists:					
-1920-----	24738	30145	19752	3237	77872
-1919-----	<u>21064</u>	<u>23458*</u>	<u>13358</u>	<u>2470</u>	<u>60350</u>
	3674	6687	6394	767	17522*

M O T O R V E H I C L E S

Season of 1920	NORTH	WEST	EAST	SOUTH	TOTAL
from June-Aug 31	3781	3766	4012	786	12345
from Aug. 31-Sept 19	<u>366</u>	<u>223</u>	<u>376</u>	<u>79</u>	<u>1044</u>
TOTALS	4147	3989	4388	865	13389

Season of 1919					
from June-Aug 31	3181	3586	2648	588	10003
	<u>267</u>	<u>181</u>	<u>188</u>	<u>42</u>	<u>678</u>
TOTALS	3448	3767	2836	630	10681

Increase in number
of motor vehicles
from 1919 to 1920

*****1920*****	4147	3989	4388	865	13389
*****1919*****	<u>3448</u>	<u>3767</u>	<u>2836</u>	<u>630</u>	<u>10681</u>
	699	222	1552*	235	2708*

SEPTEMBER NOTES ON THE ANIMALS

The show herd of 15 BUFFALO are on view at the Corrals near Mammoth. So far, about 60 calves have made their appearance in the tame herd this year. The wild herd, too, seems to be increasing.

MOUNTAIN SHEEP are on the high mountains, but occasionally seen on Mt. Washburn. Lambs are now three months old.

ELK are still on the high mountains but will be working lower all through the month. Still not apt to be seen along the tourist routes. Horns are now full grown and early in the month the elk will begin to "horn the brush" in their endeavor to rid the horns of the dried but still clinging skin. Before the middle of the month the bull elk will begin uttering their bugling, whistling, challenges on every side. The calves are now three months old and have lost their spotted coat.

DEER might be seen in small groups at almost any point throughout the trip, particularly near the Canyon; and later, about Mammoth.

BEAVER are shy but might be seen, at almost any point, in the evening, but not in the day time. In Willow Park, near the Yellowstone Bridge below Tower Falls, and on the beaver pond alongside road to Mammoth, 15 miles from Tower Falls, are the most likely places. The beaver are now returning to their homes after having spent the summer wandering about the Park as they usually do, and they are busy patching up their houses and dams.

COYOTES are common almost everywhere but the WOLVES and MOUNTAIN LIONS are so rare as to be seldom seen.

BLACK, BROWN, and CINNAMON BEARS, all the same species, just as we have black, yellow and white cats. They are to be seen about the dumps near Old Faithful, Lake, and Canyon, and also near West Thumb and Tower Falls, and might appear almost anywhere. The cubs are now about seven months old, having been born a month or more before the parents left their places of hibernation. No matter how friendly they seem, all bears are apt to become dangerous without warning. LEAVE 'EM ALONE!

GRIZZLIES are comparatively rare but might be seen about the dumps at Lake and Canyon after sunset. Not apt to appear in day time.

SEPTEMBER NOTES ON THE BIRDS

Practically all the birds are now out of their nests except a few of the osprey at the Canyon and about Yellowstone Lake, and even those will go soon. There may be a few other isolated nests, perhaps.

Fall migration is on in full swing during September. Some of our birds such as: lazuli buntings, the hummingbirds, willet, spotted and least sandpipers, the swallows, western tanagers, and some of the warblers left for the south during August. During September, the rest of the warblers and sandpipers, the flycatchers, many native sparrows, the kinglets, the cranes and herons, the gulls and pelicans, the nighthawks, the Swainson and marsh hawks, and most of the woodpeckers will leave for the south. The main flight of juncos will pass through early in the month and the white-crowned sparrows a little later. The Brewer blackbird main flight will be about the fifteenth. The numbers of all the migratory birds still remaining will be greatly depleted. The magpies that have spent the summer on the plains will move back up into the Park. The nutcrackers and jays will come down from the mountain heights and alpine forests to a lower elevation.

The camp-robber, as the Rocky Mountain jay is colloquially known, will be a very persistent visitor to camps and all stopping places in search of table scraps.

Great numbers of ducks and geese are coming down from the north and many varieties are to be found on all our ponds, and lakes, and streams.

M. P. SKINNER,
Park Naturalist.

Approved for publication,
September 1, 1920.

HORACE M. ALBRIGHT,
Superintendent.

S E P T E M B E R

MONTHLY REPORT FROM THE CHIEF RANGER'S OFFICE

1. GENERAL CONDITIONS

September marked the close of the biggest and most successful years in the history of the park. The permanent Rangers, with the assistance of 36 temporary men, handled 79,777 tourists without a serious accident. No fires for the month were reported and all game seen are said by the Rangers, to be in the best of condition.

An early snow covered the entire park September 24, and 25. Its depth as was reported:

Mammoth.....	2.0 inches.
Norris.....	6.0 inches.
Madison Junction.....	8.0 inches.
Riverside.....	7.0 inches.
West Yellowstone.....	6.0 inches.
Upper Basin.....	5.0 inches.
West Thumb.....	23.0 inches.
Snake River.....	30.0 inches.
Lake.....	12.0 inches.
Sylvan Pass.....	22.0 inches.
(In pass).....	36.0 inches.
Canyon.....	16.0 inches.
Tower Falls.....	9.0 inches.
Soda Butte.....	11.0 inches.

With the exception of snow in the high passes, all station reports indicated no snow Oct. 1.

It was also reported and is claimed by the Park Naturalist that all big game are still high in the mountains, where grazing is said to be excellent. Several complaints have been received relative to the bear breaking into the camps and stations.

By order of Superintendent Albright, Rangers at the checking stations continued to charge the specified entrance fee throughout the month.

II. PERSONNEL.

The following Rangers, holding temporary appointments were released from duty and their services terminated September 10,:

- ✓ William Troutman..... Upper Basin.
- ✓ Vernon Downs..... Upper Basin.
- ✓ Lessing L. Engleking.... Canyon.
- ✓ Robert Ide..... Fountain.
- ✓ Lew Sarrett..... Sylvan Pass.
- ✓ Frederick Fishback..... Lake.

The following Rangers, holding temporary appointments were released from duty and their services terminated September 13,:

- ✓ Ray Teesdale..... Canyon.
- ✓ Frank Parsch..... Canyon.
- ✓ Guy Grove...174..... West Yellowstone.
- ✓ Nelson Howard..... Mammoth.

The following Rangers, holding temporary appointments were released from duty and their services terminated September 15,:

- ✓ ~~Frank H. Knight~~
- ✓ Louis Druskin..... Fountain.
- ✓ L. Dow Nichols Jr..... Lake.
- ✓ Roger C. Goode..... Mammoth.
- ✓ Charles H. Watkins..... Upper Basin. *
- ✓ John L. Tyler..... Motorcycle patrol.*
- ✓ Leon D. Mink..... Sylvan Pass.
- ✓ Oze Van Wyke..... Mammoth #
- ✓ Edgar E. Randolph..... Gardiner *auth*
- ✓ Tom Meek..... Madison Junction # *auth*
- ✓ Kenneth Church..... Mammoth. *Not a ranger*
- ✓ *Angus Robertson*

The following Rangers, holding temporary appointments were released from duty and their services terminated September 20,:

- ✓ Hollis N. Mathew...19.... Motor cycle patrols. *
- ✓ Emmet S. Mathew...19.... Motor cycle patrols. *
- ✓ Russell Sprinkle..... Motor cycle patrols.
- ✓ Henry Ravenell..... Canyon.

* Holding a W.A.E. appointment.

Resigned September 1, 1920.

✓ Arthur R Best Sept 18
Mrs Damm 16

11. Personnel, continued.

The following Rangers, holding temporary appointments were released from duty and their services terminated October 1, :

Dean M. Hausman..... Chief Ranger's Office. *
✓ Wendell S. Keate..... Norris.

Changes in the personnel.

Sam Hurless, Ranger in charge of the West Yellowstone checking station was transferred September 18, to the Upper Geyser Basin, where he was ordered to supervise the cutting of wood. #

Hans Larson, temporary, at the Riverside station was transferred September 1 to Mammoth. He was appointed permanent Ranger September 17 and ordered to report at the Crevice station.

E.M. Meade, temporary,* on duty with the motorcycle patrol, was transferred September 18 to the West Yellowstone Checking station to relieve Ranger Hurless.

Robert Wilkenson, temporary, stationed at the Canyon, was transferred to Sylvan Pass September 13, where he was detailed to check the auto traffic.

Wendell M. Bishop, Riverside station, ordered to report at the Chief Ranger's Office September 24, to relieve Ass't. Chief Ranger George T. Dustman.

Ass't. Chief Ranger George T. Dustman, in charge of Chief Ranger's Office, temporary Rangers and motorcycle riders, transferred to the clerical division September 20.

Luther Custer, Thumb station, ordered to report at the Riverside station September 27, to relieve Ranger Bishop.

Roy T. Frazier, Mammoth ordered to report at the West Gallatin station September 18, to relieve Ranger Douglas, appointed Ass't. Chief Ranger, Southern district.

* Holding W.A. E. Appointment.

Temporary Ranger.

II. Personnel, continued.

Frank J. Winess, Ranger in charge of Lake station, reported at Chief Ranger's Office September 31 with resignation to become effective October 7.

Albert T. Bicknell, appointed permanent Ranger and ordered to report at Lake station September 30. Oath of office taken October 5.

James Russell, Ranger at large, ordered to report at Lake station September 25. Authorized to take charge of station by Chief McBride.

Ass't. Chief Ranger Charles J. Smith, Upper Basin station reported at Mammoth September 17. Ordered to report at West Yellowstone September 30 to take charge of Western District.

Lee Cottrell, appointed Ranger on the permanent force September 12. Ordered to report to Ranger Little at the the Bechler river station.

Ranger Clifford Anderson, appointed Ranger on the permanent force September 10. Reported to Ranger Dupuis at the Tower Falls station September 17.

Ranger Court B. Dewing, Fountain station, ordered to report at Mammoth September 14. Detailed September 15 to Crevice station during the hunting season.

E.T. Scoyen, Ranger in charge Canyon station, ordered to close station September 19. Detailed September 25 to Upper Yellowstone country for the hunting season.

C.O. Davis, Lake Ranger station, ordered to report at Mammoth September 20. Detailed to the Upper Yellowstone during hunting season September 29.

Ranger James Brooks, assistant chief Ranger in charge of the southern district ordered to report at Mammoth September 25 and to be ready for transfer to Glacier National Park.

*Noted
March 11, 1968
E.T. Scoyen*

II. Personnel, continued.

Leaves of absences.

F.J. Townsend, Ranger in charge at Norris station, September 12,.....to..... September 27. Ranger Keate, temporary, had charge of station during the absence of Ranger Townsend.

Wendell M. Bishop, Riverside Ranger station, September 16 to 18,.....September 19,...to 25th. Reported for duty at Chief Ranger's Office after the duration of the leave.

W.M. Purdue, Snake River Ranger station, September 21,.....to..... September 22,. Two days. Ranger Bowman in charge of station during absence.

Calvin O. Davis, Lake Ranger station, September 24,.....to..... September 26,. Two days. Reported for duty in Upper Yellowstone district upon the duration of the leave.

Dean M. Hausman, Chief Ranger's Office, September 30,.....to.....October 7,. Seven days. Given indefinite furlough after the termination of his leave.

The following Rangers paid official visits to Mammoth during the month:

Fred J. Townsend	Wendell S. Keate
Ford Purdy	Hans Larson
Wendell M. Bishop	E.M. Meade
Charles J. Smith	Luther Custer
Earl Bowman	William N. Purdue
Raymond Little	James Russell
Frank J. Winess	C.O. Davis
E.T. Seelyen	James Dupuis
George Winn	Henry Anderson
Court B. Dowing	Joseph Douglas

Rangers Robert Wilkenson and E.M. Meade, both temporary were retained on the force during September to permit permanent men to prepare for the hunting season patrol and cutting of winter wood.

III. WORK COMPLETED.

The usual preparations for the winter patrolling was carried out to a large degree by the permanent men. A noticable feature of this work was the time devoted to every detail which will tend to make the game protecting more thorough and efficient as well as more comfortable for the men.

Station work.

Under the direction of Ass't. Chief Ranger Harry Trischman new snow shoe cabins were constructed and many of the older cabins in need of repair were re-lined and placed in first class order.

A new snow shoe cabin was constructed at the head of the Thoroughfare district which will be used the entire winter by Rangers patrolling the eastern border of the park. A large quantity of rations has been packed to the cabin for use during the hunting and fire patrol seasons.

Rangers covering the territory from the Snake River station to Hatzbell creek and Fox creek will also have cabins to spend the night in. The construction of the cabins on these two creeks is practically completed. Pack trains have started freighting the rations into these cabins.

Ranger Henry Anderson, Soda Butte station, is constructing a cabin near the north boundry line of the park to be used during the hunting season while patrolling that district. This cabin is hidden where trappers and hunters are unlikely to find it.

The South Riverside cabin, located near the 21 mile post on the West boundry of the park, was re-built this month. A new board roof and floor was installed by Ass't. Chief Trischman and his crew. This cabin will be used twice a week by the patrolman from the Riverside station.

The same crew also re-built the Buffalo Lake cabin on the West boundry, located near the six mile post. A new board roof and floor was built in. This cabin will be used regularly by the patrolman from the Bechler River station.

III. WORK COMPLETED, continued.

Station work, continued.

The trail crew under the direction of Ass't. Chief Ranger Trischman, completed the Jones Pass trail, leading from Turbid Lake to Jones Pass, thence down Jones creek to the eastern border of the park and north to Frost Lake. Rangers patrolling over this trail, work under the advantage of being able to "field" a vast area of the park. 17 mi

Stations rationed for winter patrols.

A special pack train and packer is working under the employment of the department, freight-ing rations to all of the snow shoe cabins. The train has spent the entire month in work on these cabins. The following snow shoe cabins were rationed,:

Soda Butte	60 rations.
Miller River	30 rations.
Cold River	30 rations.
Frost Lake	60 rations.
Pelican	60 rations.
Park Point.....	30 rations.
Cabin Creek	30 rations.
Upper Yellowstone.	60 rations.
Harebell	30 rations.
Lewis Falls	60 rations.
Cascade	60 rations.
Buffalo Lake	30 rations.
So. Riverside	30 rations.
Greyling	60 rations.
Sportsman Lake ...	30 rations.
Hellroaring	30 rations.
Lo. Slough Cr.....	60 rations.
Thumb.....	60 rations.*
Canyon	60 rations.*
Norris	60 rations.*
Madison Junc.....	60 rations.*
Upper Basin	30 rations.*
Total.....	1,620 rations.

NE con

* Loop stations unoccupied during the winter.

Rationed for those who do not care to pay board at the rate of 50 cents per meal. 22

III. WORK COMPLETED, continued.

Patrols.

September 15 marked the close of the fire patrolling, which was the outstanding feature of the entire Ranger force this season. The few fires during the season did very little damage and were soon under control.

Permanent and temporary Rangers were responsible for 6 arrests as the result of a like number of parties, neglecting to extinguish their camp fires. All were taken before U.S. Commissioner John W. Meldrum and punished as he deemed advisable.

Temporary Rangers patrolled practically two thirds of the entire park and proved very effective in controlling the tourist travel off the main highways. It is just to say they were responsible for the preservation of many acres of tall timber as the result of their careful attention.

The danger of fires in the park during the summer months, despite the record of a heavy rain-fall, proved to be the greatest worry to the department. This is accounted for by the fact that thousands of tourists searched deep into the interior of the park for elk horns. This privilege, made constant patrolling almost a necessity. Nevertheless, no serious accidents or defacement resulted.

The motor cycle Rangers closed their season September 20, its second year in the history of the park. Five Rangers attended to this duty, controlling traffic, patrolling irregular auto camps, fishing holes and out-of-the-way formations, in addition to the delivery of the regular Ranger mail and in the carrying of dispatches. Seventeen motorists were taken before the U.S. Commissioner by this branch of the Ranger force on charges of breaking the traffic rules and regulations. All were punished by the Commissioner as he deemed advisable.

All permanent men were ordered to the park lines September 15, with instructions to be constantly on the look-out for duck, chicken and deer hunters. This game is reported in abundance over the entire park and especially near the West Gallatin range.

III WORK COMPLETED, concluded.

Hay

Buffalo Ranch.

B.C. Lacombe, head keeper at the Buffalo ranch, reported that 450 tons of hay was harvested on the meadows of the ranch. Fourteen men were employed there during August and the fore part of September. The hay will be used in the protection of the large herd of buffalo. Present weather conditions and the abundant forage on the range, indicates a mild winter for the herd. About fifty head of buffalo calves are now being fed hay from the supply.

Slough Creek.

A large crew of men under the supervision of Chief McBride and "Peck" Hutchins, completed the harvest of the largest hay crop in the history of the Slough Creek Horse Ranch September 8. Over 850 ton is in the stacks, all of which is claimed to be first class hay. This hay will be used to feed the large herd of N.P.S. and D. of I. horses.

Soda Butte and Yancey.

The Soda Butte and Yancey meadows yielded heavy crops but the extreme shortage of labor made it almost impossible to harvest the entire hay area. As a result, but 110 ton of hay was stacked.

The heavy expence encountered last year in the feeding of the game and stock of the department, due to the shortage of hay and grass in the low-lands will be almost counteracted by the abundant crops and excellent feeding grounds. It is the common belief that our own harvests will be adequate to winter the game and government horses.

IV. WORK IN PROGRESS.

Auto Camps.

Four large, free public automobile camps were open to the motor public during the entire season. These camps were constantly policed by the Rangers, who supervised their keeping in a sanitary condition. These proved to be one of the greatest assets in the park as well as one of the hardest to maintain.

Throughout the entire tourist season these camps were being enlarged and made more comfortable. It is the intention of the department to have many more of these camps constructed at the many prominent attractive formations on the loop. Plains are already made to have similar camps at all of the interior stations.

Trails.

The trail crew, under the direction of Ass't. Chief Ranger Harry Trischman moved their camp to the western border of the park. The border line is being cleared of all fallen timber and surrounding trails placed in condition for winter patrolling.

Cabins.

Plains have been made for the construction of two new snow shoe cabins in the southern district of the park. Men are in that vicinity at the present time but it is doubtful if the cabins will be completed for use during the 1920-21 season.

Stations.

Though plans have been made to repair many of the stations in the park, but labor difficulties and financial matters has made it impossible to make any progress in this line.

Camps and Lunch Stations.

Many of the old "eye-sore" buildings along the highways in the park are being torn down and the timber used as fuel by the Rangers in the vicinity. These old stopping places have been out of use for several years which the Rangers in the immediate vicinity feel is a detriment to their neighborhood.

V. WORK BEGUN.

See LLI and IV.

VI. PLANS ON PROPOSED WORK.

Orders issued by Chief Ranger McBride to Rangers at their respective stations clearly specifies that every precaution possible must be taken to protect the birds and animals in the park. Men have been ordered to make camps along the entire park lines where hunters or poachers are apt to work within the lines of the park. These men will held on these duties until about January 1. During the winter they have been instructed to make an investigation of their entire territory not less than twice a week and in the more populated areas, at least once a day.

The order of hunting season patrols is as follows,:

One man west to six mile post,
Gardiner.....three times per week.
One man to patrol east to three
mile post, twice a week.

One man camped east of station
Crevice.....on park line between Hellroaring.
One man to make daily patrol west
on line to Bear Creek.

One man to patrol south
Soda Butte.....to Frost Lake.
One man to patrol west
to Slough Creek.

One man camped on park line be-
Tower Falls....tween Slough Creek and Hellroaring.
One man for emergency duties
at any time necessary.

VI. PLANS ON PROPOSED WORK.

One patrol weekly to Frost Lake.
Sylvan Pass.... One patrol weekly to Crow and
Jones Creeks.
One patrol to line on Eagle creek.

One man patrol twice a week from
Upper Yell.'...U.Y. to Fox creek.
One man patrol twice a week to
Mountain creek and on to line.

One man to patrol twice a week
Snake River....to the Cascade cabin.
One man to patrol weekly to Fox
creek, via Harebell creek.

One man camped on west line
Bechler.....during entire hunting season.
One man twice a week to the
Cascade cabin.

One man camped on park line be-
Riverside.....tween Greyling and West entrance.
One man twice a week to 6 mile post
south of South cabin on park line.

One man twice a week from sta. to
West Gall.'....Sportsman Lake.
One man camped on park line between
station and Greyling cabin.

Two visits each week to the Can-
Norris.....yon hotel and camps.
Two patrols a week to Grizzlie
Lake and vicinity.

VI. PLANS ON PROPOSED WORK.

Permanent Rangers and their respective stations is as follows:

	Chief Ranger James McBride.
At large.....	Ass't. Chief Ranger Harry Trischman.
Ch. R'g'rs Off.....	Wendell M. Bishop.
	Thad C. Pound.
Gardiner.....	A.L McLaughlin.
	Court B. Dewing.
Crevice.....	Hans Larson
	James Dupuis
Tower Falls.....	Clifford Andersen Peter Lawson
	George Winn
Seda Butte.....	Henry Anderson
	James Russell
Lake.....	A.T. Bisknell Joseph Douglas, Ass't. Chief
	E.T. Scoyen
Upper Yell'.....	C.O. Davis
	W.N. Purdue
Snake River.....	Earl Bowman
	Raymond T. Little.
Bechler.....	Lee Cottrell
	Ford Purdy
Riverside.....	Luther Custer Charles J. Smith, Ass't. Chief
	Sam Woodring
West Gallatin.....	Roy T. Frazier
Norris.....	F.J. Townsend.

VII. POLICIES.

The high standard of courteous and efficient service to the visitors of the park has been maintained throughout the summer. The few minor complaints received about the men were due to their too intense interest to serve the National Park Service to the best of their abilities.

An added feature to the permanent Rangers work is the co-operation inaugurated between the Park Rangers, Forest Rangers and Deputy State Game Wardens of Montana, Wyoming and Idaho. All men on the permanent force have been appointed Deputy Game Wardens of the state bordering the park along their respective districts. These appointments were secured to benefit the game protection work of all three services.

VIII. COST OF OPERATIONS.

See annual report to the Director.

IX. OTHER MATTERS OF INTEREST.

Game.

Game of all descriptions and in large numbers began to make their appearance in the lowlands of the interior of the park during the latter part of the month, according to the reports of the Rangers. It is claimed by authorities in the personnel of the force, that never before have they seen the game in such excellent conditions. Their actions indicate, according to old traditions, a very light but early winter. Elk are in exceptional high flesh, among which the many young calves are the best example.

All preparations for their protection during the hunting season have been practically completed.

IX. OTHER MATTERS OF INTEREST.

Game.

Buffalo, wild herd.

Very few of the wild buffalo herd were seen during the month. They are still high in the mountains where their forage is abundant.

Buffalo, tame herd.

By order of the Director of National Parks a young buffalo bull has been granted the Toledo, Ohio Zoology Society which will be taken from the tame herd. It is understood the Society is to defray the expense of shipping the animal, which will be shipped after the vaccination of the herd in November.

Buffalo Keeper Lacombe reported over 500 head in the herd. Of this number about 50 are calves. Discouraging losses were encountered in the calving due to the severe winter and essential shifting of the herd. Several calves were killed during these moves.

During the month, two moving picture men visited the ranch. Mr. McClintock, representing the N.P.S. Publicity department succeeded in securing some excellent pictures of the buffalo in their native haunts. He was closely followed by J.E. Haynes, official park photographer, accompanied by Mr. Gregg a well known friend of the park.

The show herd of 15 animals held in the large corrals near the Mammoth Camps by Ranger Peter Lawson, proved to be one of the greatest attractions of the season. Guide trips were taken to the herd twice a day by both the hotel and camping company. This herd was taken back to the Buffalo Ranch September 21.

Bear.

The closing of the resorts about the park brought many ovacious bear to these places. Many complaints were received about them breaking into store-houses etc. Ranger Lawson was detailed to the Canyon to investigate the actions of a Cinnamon but failed to discover him to be above the ordinary at this time of the year.

IX. OTHER MATTERS OF INTEREST.

Game.

Antelope.

More than 500 antelope were seen by the Rangers in the Slough Creek, Turkey Pen and Black Tail districts during the month. Uncompleted counts of the herd shows them to be more than 800 in number. A very noticeable increase was noted.

Deer.

The first snow of September brought many black tail deer down out of the mountains. A large herd made its appearance on the lawns of the residences at Mammoth. A satisfying number of fawn is among the herd.

Elk.

Dispite the slaughter and severe winter of 1919-20, the monthly reports of the Rangers disclose many large herds in the vicinity of Norris, Snake River, West Gallatin and Soda Butte. Their protection is an eminate feature of the work to follow.

Moose.

Rangers in three distinct areas of the park reported seeing herds of Moose. Ranger Raymong Little reported a herd of 25 in the Bechler River district. The same herd, was also reported by Rangers Ford Purdy and Hans Larson.

Ranger W.S Keate of Norris reported a herd of eight near the Virginia Cascades. Three were seen by Ranger Bishop near Mount Holmes.

Ranger Larson reported a lone, large bull across the park line from Crevice station. Some action should be taken relative to this animal in the near future as hunters are quite numerous in that district. Game laws will not protect him.

Carniverous animals.

Coyotes in large numbers have been reported in the western district. All rangers are carrying fire-arms to rid the park of these animals.

IX. OTHER MATTERS OF INTEREST.

Fishes.

More than one million trout were planted in streams of the park during the month. Most of these fish were hatched at the hatchery at Yellowstone Lake. The streams in which fish were planted and the number, is as follows:

Blackspotted trout.

September 2,	Tower Creek	76,000
September 3,	Hellroaring creek	52,000
September 4,	Slough Creek	105,000
September 11,	Sedge Creek	52,000
September 11,	Bear Creek	48,000
September 13,	Bechler River h'd. wts	84,700*
September 13,	Columbine Creek	130,000
September 13,	Cub Creek	180,000
September 13,	Clear Creek	100,000
September 13,	Thumb	110,000
Total.....		1,042,700

All of these trout were taken to the head waters of the creeks by pack trains under the direction of members of the Ranger force.

Fishing in the Madison and Snake Rivers is excellent, which a large number of tourists have taken advantage of. Loch Leven trout, weighing from one to six pounds are being caught regularly in the Madison river in the vicinity of the Riverside Ranger Station.

Probably the largest trout on record as being caught in the Yellowstone Park was landed by Ranger Earl Bowman of the Snake River station while fishing in the Snake River. The confirmed weight of the trout, a Mackinaw is 22 pounds, undressed and was 36 inches long. The fish was skinned and shipped to a taxidermist for mounting.

* Mr. William C. Gregg of New England became intensely interested in the Bechler River district of the park and due to the fact, offered to loan his pack train to the National Park Service for the purpose of planting fish in these waters.

Elk horns.

Upon order of Superintendent Albright, tourists were prohibited from taking elk horns out of the park. Rangers were ordered to discourage the hunting of them.

IX. OTHER MATTERS OF INTEREST.

Arrests and violations of laws.

September 1, 1920.

Niel Slater, case continued from August 31, tried before U.S. Commissioner on a charge of speeding. Dismissed, insufficient evidence. Ranger Nichols.

September 3, 1920.

Joos Keos, Butte, Mont., tried before U.S. Commissioner for cutting green timber at Lake. Fined \$10 with sentence suspended. Ranger Winess.

September 9, 1920.

Fred Anholt and Mark Borchert, Billings, Mont., tried before U.S. Commissioner on charges of cutting knotted trees. Fined \$5 and costs each. Ranger Winess.

September 9, 1920.

C.A. Hamilton, Y.N.P., tried before U.S. Commissioner charged with cutting green timber. Acquitted. Ranger Winess.

September 9, 1920.

William Aspin, tried before U.S. Commissioner on a petty larceny charge. Fined \$100 and costs and dismissed from the park. Ranger C.J. Smith.

September 13, 1920.

Joseph I. Miller, Y.P.C. Co., tried before U.S. Commissioner charged with speeding. Fined \$25 and costs of the case. Ranger Sprinkel.

September 14, 1920.

Elias Ahuga, tried before U.S. Commissioner charged with speeding. Fined \$25 and costs of the case. Ranger H. Mathew.

September 20, 1920.

C.A. Hamilton, Y.N.P., tried before U.S. Commissioner charged with speeding. Fined \$25 and the costs of the case. Ranger Sprinkle.

LARGEST DAYS OF TRAVEL FOR PASSENGERS

1920

1919

Sept'. 1 ..Transpn. Co...255 Sept'. 2 ..Transpn. Co...169
Sept'. 1 ..Private cars..636 Sept'. 1 ..Private cars..421

By entrances:

With Transportation Co.

Sept'. 3,..North entrance 76 Sept'. 7,..North entrance. 78
Sept'. 1,..West entrance. 179 Sept'. 2,..West entrance.. 94
Sept'. 5,..East entrance. 42 Sept'. 3,..East entrance.. 31

By entrances:

Private transportation.

Sept'. 5,..North entrance 155 Sept'. 1,..North entrance. 161
Sept'. 1,..West entrance. 96 Sept'. 3,..West entrance.. 94
Sept'. 1,..East entrance. 142 Sept'. 5,..East entrance.. 78
Sept'. 4,..South entrance 33 Sept'. 11,..South entrance. 28

Largest days of travel for paid automobiles.

All entrances:

Sept'. 1,..... 161 Sept'. 3,..... 63

By entrances:

Sept'. 5,..North entrance 35 Sept'. 1,..North entrance. 26
Sept'. 1,..West Entrance. 26 Sept'. 3,..West entrance.. 21
Sept'. 1,..East entrance. 40 Sept'. 4,..East entrance.. 20
Sept'. 5,..South entrance 7 Sept'. 11,..South entrance. 5

Largest days for total number of passengers entering.

Sept'. 1,..... 636 Sept'. 1,..... 421

During the month of September, 1920, 7,356 people entered the park as compared with 4,402 people entering during September 1919, which is an increase of 2,954 people, or about 37 per cent.

During the month of September, 1920, 1,024 paid automobiles entered the park, as compared with 776 paid automobiles entering during September, 1919, which is an increase of 248, or about 28 per cent.

During the month of September 1920, 3,234 people entered the park with the Transportation Company as compared with 1,646 people entering with the company during the same month of 1919, which is an increase of 1,588 people, or about 47 percent.

The total travel for the season to include September 31, was 79,777 people as compared with 62,261 people for the entire 1919 park season, which is an increase of 17,516 people or about 27 percent.